oxidative addition of a silicon-hydride bond from the second member across an olefinic carbon-carbon double bond of the strained ring olefin.

10. The process of claim 9, wherein the catalyst is a late-metal catalyst selected from the group consisting of 0.01 to 5 weight % Karsteadts catalyst, Spiers catalyst, and 5% palladium supported on carbon.

11. The process of claim 10, further comprising the step of isolating the first member from undesirable isomeric products or impurities.

12. A process of making a first composition selected from the group consisting of silane, siloxane, silsesquioxane, POSS, silicate, and POS each bearing at least one strained ring olefin, wherein the member is a monomeric, a polymer, or a oligomer, the process comprising:

contacting a second composition selected from the group consisting of silane, siloxane, silsesquioxane, POSS, silicate, and POS with effective amounts of a halide or functionally equivalent silane coupling agent bearing the strained ring olefin in a solution,

13. The process of claim 12, further comprising the step of removing a byproduct.

14. The process of claim 13, wherein the byproduct is removed by a technique selected from the group consisting of trapping, extraction, and precipitation.

15. A novel compound comprising a composition selected from the the group consisting of silane, siloxane, silsesquioxane, POSS, silicate, and POS each bearing at least one strained ring olefin.

16. The compound of claim 15, wherein the compound is made by the process of claim 9.

17. The compound of claim 15, wherein the compound is made by the process of claim 10.

18. A novel compound comprising a composition selected from the group consisting of silane telechelics, siloxane telechelics, silsesquioxane telechelics, POSS telechelics, silicate telechelics, and POS telechelics each bearing at least one strained ring olefin.

19. A method of curing the first composition of the process of claim 9, comprising:

reacting the second composition with effective amounts of a vulcanizing agent comprising organoperoxides, persulfides, and sulfur.

20. The method of claim 19, wherein the concentration of the vulcanizing agent ranges from 1 to 50 weight %.

21. The method of claim 19, wherein the concentration of the vulcanizing agent ranges from 2 to 25 weight %.

22. A method of curing the first composition of the process of claim 9, comprising:

reacting the second composition with effective amounts of a mixture of at least one metal-based catalyst comprising molybdenum, tungsten, ruthenium carbenes, halides, phosphates, and acetates, and at least one cocatalyst comprising organoaluminum halides and aluminum halides.

~~23~~. The method of claim ~~22~~, wherein the concentration of the mixture ranges from 0.01 to 1000 millimole per mole of olefin.

~~24~~. The method of claim ~~23~~, wherein the concentration of the mixture ranges from 0.1 to 20 millimole per mole of olefin.

25. A method of curing the first composition of the process of claim 9, comprising:

reacting the second composition with effective amounts of at least one difunctional or polyfunctional silanes in the presence of effective amounts of a catalyst comprising palladium halides, platinum halides, olefin complexes, and the carbon supported versions thereof.

26. A method of curing the first composition of the process of claim 10, comprising:

reacting the second composition with effective amounts of a vulcanizing agent comprising organoperoxides, persulfides, and sulfur.

~~27~~. The method of claim ~~26~~, wherein the concentration of the vulcanizing agent ranges from 1 to 50 weight %.

~~28~~. The method of claim ~~26~~, wherein the concentration of the vulcanizing agent ranges from 2 to 25 weight %.

29. A method of curing the first composition of the process of claim 10, comprising:

reacting the second composition with effective amounts of a mixture of at least one metal-based catalyst comprising molybdenum, tungsten, ruthenium carbenes, halides, phosphates, and acetates, and at least one cocatalyst comprising organoaluminum halides and aluminum halides.

30. The method of claim 29, wherein the concentration of the mixture ranges from 0.01 to 1000 millimole per mole of olefin.

31. The method of claim 30, wherein the concentration of the mixture ranges from 0.1 to 20 millimole per mole of olefin.

32. A method of curing the first composition of the process of claim 10, comprising:

reacting the second composition with effective amounts of at least one difunctional or polyfunctional silanes in the presence of effective amounts of a catalyst comprising palladium halides, platinum halides, olefin complexes, and the carbon supported versions thereof.